

# PATENT ABSTRACTS OF JAPAN

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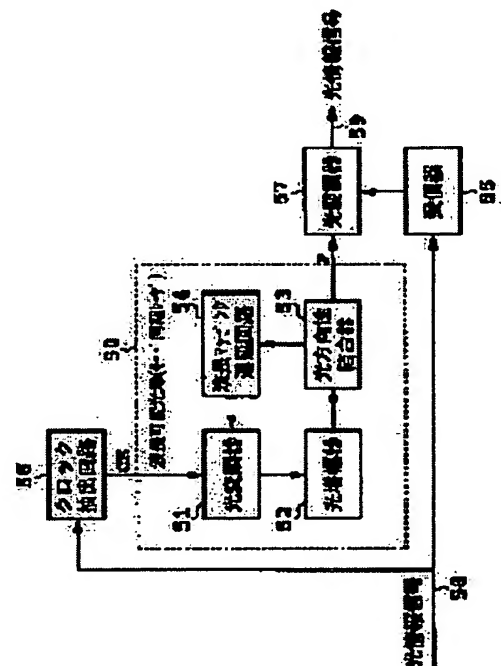
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## (54) WAVELENGTH VARIABLE LIGHT SOURCE, WAVELENGTH CONVERSION DEVICE AND WAVELENGTH ROUTER

### (57)Abstract:

**PROBLEM TO BE SOLVED:** To easily restore control information from an optical information signal with simple circuit constitution without a complicated information processing circuit.

**SOLUTION:** A wavelength variable laser is utilized as a mode synchronous laser 50 using a wavelength mapping delay circuit 54, and a modulation signal from an optical modulator 51 driven by a mode synchronizing clock signal CK is led to the delay circuit 54 consisting of an array waveguide grating, and a delay signal imparting a propagation delay different according to a wavelength of an incident beam is generated, and the frequency of the clock signal CK is changed based on the delay signal.



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